

REMARKS/ARGUMENTS

Claims 1-79 are pending in the application. Claims 3, 49 and 77 have been withdrawn from consideration but may be reasserted if a generic claim is found allowable.

Claims 1, 2,4-7, 30-42, 46-48, 50-54 and 57-63 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Besemer et al WO 95/07303 in view of Ashida et al U.S. Patent 5,824,462. It is the Examiner's view that the chlorine dioxide of Ashida et al could be substituted for the hypohalite of Besemer et al in the Besemer et al process.

Besemer et al is directed to a method of oxidizing carbohydrates which contain a primary hydroxyl group, in the presence of a nitrogen oxide compound. Besemer et al discloses hypohalites. The hypohalites disclosed are hypochlorites and hypobromites. Besemer et al discloses that the use of hypobromites results in improved yields and less side reactions. Besemer also discloses the results at several levels of hypobromite use. There is no suggestion or disclosure in Besemer that something other than a hypohalite should be used.

Ashida et al is directed to a resin coated paper. The Examiner has indicated a disclosure in the 3rd paragraph of column 12. This paragraph is in a section of the patent describing the base paper for the resin coated paper. The sentence is

“As the natural pulp, there are advantageously used wood pulps such as softwood pulp, hardwood pulp and softwood-hardwood mixed pulp which has been subjected to, for example, usual bleaching treatment with chlorine, a hypochlorite or chlorine dioxide, alkali extraction, alkali treatment, and optionally oxidation bleaching with hydrogen peroxide, oxygen or the like, and a combination of these treatments.”

Ashida et al describes standard bleaching treatments for pulp. There is no mention of a nitrogen oxide compound. A number of different bleaching chemicals are mentioned. Any could be chosen. One could just as easily choose chlorine, hydrogen peroxide or oxygen.

There is no suggestion in either Besemer et al or Ashida et al that they should be combined. There is no suggestion in either Besemer et al or Ashida et al of the specific combination selected from the two references. Nothing in Besemer et al suggests or teaches that a chemical other than a hypohalite should be used. Nothing in Ashida et al suggests that chlorine dioxide should be selected over the other chemicals

listed or that it should be used in the presence of a nitrogen oxide compound. It is requested that the rejection be withdrawn.

It should also be noted that the bleaching processes of Ashida et al is not the same as the oxidation process of Besemer et al. Bleaching is using oxidants to solubilize the lignin to remove it from the cellulose. Bleaching is not trying to oxidize the cellulose.

Claims 41, 54 and 57-61 stand rejected over Besemer et al in view of Ashida et al as applied above further in view of Tang et al U.S. Patent 4,401,810, citing Canadian patent 610,655. Tang et al was cited to show the use of sodium borohydride as a reducing agent. Besemer et al and Ashida et al were discussed above and the same discussion applies here. It is again requested that the rejection based on Besemer et al and Ashida et al be withdrawn.

Tang et al adds nothing that makes up for the limitations of the basic rejection.

Claims 1, 2,4-7, 30-42, 46-48, 50-54 and 57-63 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Besemer et al WO 95/07303 in view of Chen et al U.S. Patent 4,480,089. It is the Examiner's view that the chlorine dioxide of Chen et al could be substituted for the hypohalite of Besemer et al in the Besemer et al process.

The Besemer et al patent has been applied as it was in the previous rejection and the prior discussion of Besemer et al applies here also.

Chen et al is directed to modified cellulose products by bleaching. The paragraph mentioned by the examiner is the second paragraph of column 2 which states "Although cellulose may be bleached by various means, such as hydrogen peroxide, peracetic acid, chlorine dioxide and the like, it is preferred for the purposes of the present invention to employ an alkali metal or alkaline earth metal hypohalite, especially sodium or calcium hypochlorite."

Chen et al does not suggest the use of chlorine dioxide. Chen et al says to use a hypohalite instead of chlorine dioxide, peracetic acid, hydrogen peroxide or other bleaching chemical. The combination of Chen et al and Besemer et al is the process of Besemer et al with a hypohalite. It is requested that this rejection be withdrawn.

Claims 41, 54 and 57-61 stand rejected over Besemer et al in view of Chen et al as applied above further in view of Tang et al U.S. Patent 4,401,810, citing Canadian patent 610,655. Tang et al was cited to show the use of sodium borohydride as a reducing agent. Besemer et al and Chen et al were discussed above and the same

discussion applies here. It is again requested that the rejection based on Besemer et al and Chen et al be withdrawn.

Tang et al adds nothing that makes up for the limitations of the basic rejection.

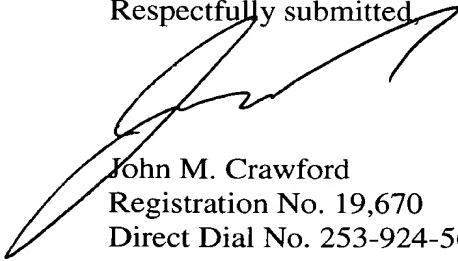
It is believed that there are allowable generic claims in this application and it is
5 requested that claims 3, 49 and 77 be examined.

Reconsideration and allowance is respectfully requested.

CONCLUSION

10 In summary, Applicant respectfully traverses the Office Action's rejections of
Claims 1-79. Based upon the above remarks, Applicant respectfully requests
reconsideration of the application and its early allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'John M. Crawford', is written over the typed name and contact information.

John M. Crawford
Registration No. 19,670
Direct Dial No. 253-924-5611